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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,796	07/31/2006	Wolfgang Niem	3761	1250

7590 10/30/2008

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EXAMINER	
BITAR, NANCY	

ART UNIT	PAPER NUMBER
2624	

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10/30/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/587,796	NIEM ET AL.	
	Examiner	Art Unit	
	NANCY BITAR	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-12 and 14-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *7 and 13* is/are allowed.

6)☒ Claim(s) *1-6,8-12 and 14-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 July 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's response to the last Office Action, filed 01/09/2008, has been entered and made of record.

2. Applicant has amended claims 1-12. Claims 13-16 have been added. Claims 1-16 are currently pending.

3. Applicant's arguments, in the amendment filed 07/07/2008 , with respect to the rejections of claims 1-6, 8-12 under 35 U.S.C. 102 (b) have been fully considered but are moot in view of the new ground(s) of rejection necessitated by the amendments. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hyodo et al (US 6,952,225).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-6,8-12, 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto ET al (US 5,548,659) in view of Hyodo et al. (US 6,952,225) .

As to claim 1, Okamoto teaches a security system having a camera for taking pictures of objects, the security system (100) including at least one subsystem (101, 102), wherein the first subsystem (101) includes a first function module (1) with a light source and configured to control the brightness of the light source (figure 1, note that the change detection unit 6 detects the changed regions in which the change of lightness deviates from the noise model , column 5, lines 5-11, moreover , Moreover, controlling the image taking timings in synchronization with the appropriately sensed flickering frequency of the lighting equipment, it becomes impossible to take the images at a rate faster than the flickering frequency of the lighting equipment), a second function module (6) configured to generate a digital image sequence from pictures taken by the camera (3) (The image input unit 2 receives the images sequentially taken by the camera 1, and supplies the images to the difference calculation unit 3 and the noise model estimation unit 4 as the input images at appropriate time intervals. Column 3, lines 1-41), and a third function module (8) configured to derive a noise variance as a function of the gray value from the digital image sequence (noise model estimation unit, 4, see column 3, lines 1-48). While Okamoto meets a number of the limitations of the claimed invention, as pointed out more fully above, Okamoto fails to specifically teach controlling the brightness of the light source with respect to camera parameters. Specifically, Hyodo et al. teaches the use of he digital camera has an electronic flash 46, and has a low luminance automatic flash mode for automatically flashing the electronic flash 46 when the subject luminance is low, a compulsory flash mode for flashing the electronic flash 46 regardless of the subject luminance, a flash prohibition mode for prohibiting the electronic

flash 46 from flashing, and the like. The mode is selected by operating an electronic flash key (not illustrated). The white balance is adjusted according to the selected mode ((column 2, lines 1-65) Moreover, Hyodo teaches the CPU 38 controls the circuits in accordance with the inputs from the camera control part 40 including a shutter release button, etc., and performs an automatic focusing, an automatic exposure control, an automatic white balance adjustment, and the like. The auto focusing is, for example, a contrast AF for moving the taking lens 10 so that the high frequency component of the G signal achieves the maximum. When the shutter release button is half pressed, a lens driver 42 moves the taking lens 10 to a focusing position so that the high frequency component of the G signal achieves the maximum. it would have been obvious to one of ordinary skill in the art to control the brightness of the light source in the lighting conditions of the flickering fluorescent lamp in Okamoto in order to determine the light source correctly, so that the white balance can be satisfactorily adjusted according to the type of the light source thus reducing the rate of mistaken detection. . Therefore, the claimed invention would have been obvious to one of ordinary skill in the art at the time of the invention by applicant.

As to claim 2, Okamoto teaches the security system as defined by claim 1, wherein the security system (100) includes a memory (9), in which the function values of the noise variance can be stored in memory as a function of the gray value (noise model estimation unit, column4, lines 4-7and a noise memory unit for memorizing the noise model estimated by the noise model estimation unit 4, figures 2-3)

As to claim 3, Okamoto teaches the security system as defined by claim 1, wherein the second subsystem (102) includes a function module (13) configured to compare a gray value

variance, derived from pictures taken by the camera, with a predeterminable threshold value (an average of a sum of the square of the smoothed normalized difference nd'.sub.p (x, y) for all the n successive images is calculated for each picture element and at the step ST17, the calculated square sum average of the smoothed normalized differences is compared with the predetermined threshold Th in order to obtain the binarized image mv in which the picture elements belonging to the changed regions have the value 1, while the remaining picture elements have the value 0, column 5, lines 45-65, figure 4) .

As to claim 4, Okamoto teaches a method for operating a security system, including a camera for taking pictures of objects (camera 1) , and at least one subsystem wherein the subsystem includes a first function module with a light source, a second function module(operating phase) and a third function module(figure 2 and figure 4) comprising the method steps of: taking pictures of objects using camera (1, camera 1 for sequentially taking images of a target moving object against a static background; an image input unit 2 for inputting images sequentially taken by the camera 1 as input images at appropriate timings), controlling the brightness of the light source in the first function module ( ), generating a digital image sequence from pictures taken by camera using the second function module (6), and deriving a noise variance as a function of a gray value from the digital image sequence using the third function module (when the actual lightness variation of the static image fits with this noise model, the difference for each picture element belonging to the static region can be estimated from the average difference E(di) and the lightness of each picture element. Errors in determining the estimated differences from the actual differences are distributed according to the normal distribution, column 4 lines 46, column 6, lines 28)

As to claim 5, Okamoto teaches the method as defined by claim 1, wherein in the first operating state of the security system (100), the noise variance is ascertained as a function of the gray value of an image sensor (4) located in the camera (see equation 1 and 2, figure 4 where di/E(di)=.alpha..times.i+.beta.+d(0, .sigma. , figure 2-3) and is stored in a memory (noise model memory unit, 5, figure 1).

As to claims 6 and 8, Okamoto teaches wherein for ascertaining the noise variance as a function of the gray value, the camera (3) including the image sensor (4) is subjected to the radiation of a light source (see figure note that the noise model estimation unit 4 estimates appropriate noise model parameters by substituting the input image supplied from the image input unit 2 and the difference image and the average difference supplied from the difference calculation unit 3 into a prescribed noise model representing a light variation of the static image due to the lighting conditions, column 3, lines 42-55).

As to claim 9, Okamoto teaches the second operating state of the security system (100), images of a region to be secured are taken by the camera (3), and these images are examined for the presence of moving objects in the region to be secured (detect a movement of a target moving object at high precision, without being affected by the variation of the image taking environmental condition such as lighting condition, column 6, lines 21-28,).

As to claim 10, Okamoto teaches wherein from chronologically successive pictures of the region to be secured, the gray value variance for at least selected pixels is ascertained; that if a deviation is found, a comparison with a threshold value is made, and this threshold value is predetermined variably as a function of the gray value (the picture elements having the value 0 in

the binarized image mv are those which are regarded as belonging to the static regions according to the noise model of the equation (1) at the desired confidence level, while the picture elements having the value 1 in the binarized image mv are those which are regarded as not belonging to the static regions according to the noise model of the equation (1) at the desired confidence level, column 5, lines 49- column 6, lines 1-20)

As to claim 11 Okamoto teaches the method as defined by claim10, wherein the variable threshold value is read out from values stored in the memory (9) (note that the operation in this change detection unit 6 is carried out according to the flow chart of FIG. 4, column 5, lines 5-65).

As to claim 12, Okamoto teaches the security system as defined by claim 1, wherein a dependency of the noise variance on the gray value is ascertained for different parameters of the camera (3) and is stored as a function value in a memory device (9) (specifying a ratio of a difference in lightness at each picture element of each difference image with respect to an average difference in lightness over an entire imaging view field of each difference image as a function of lightness at each picture element in each input image expressed in terms of the noise model parameters, figure 2, note that applicant did not define what camera parameter is being controlled, so examiner interpret controlling the time exposure taught by Okamoto and adjusting the white balance based upon light source taught by Hyodo).

The limitation of claim 14-16 has been addressed above.

Allowable Subject Matter

6. Claims 7 and 13 are allowed. None of the prior art teaches "the light source is controlled such that the brightness of the light source is increased in small increments as a function of time and then after each increase is kept constant for a predeterminable length of time, so that a kind of stairstep curve for the functional dependency of the brightness of the light source on the time is created. The Examiner finds no reason or motivation to combine the above references in an obviousness rejection thus placing the application in condition for allowance

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NANCY BITAR whose telephone number is (571)270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jinge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/
Supervisory Patent Examiner, Art Unit 2624

Nancy Bitar 10/4/2008